

We claim:

1. An interior rearview mirror for a vehicle having a front windshield comprising:
a mounting bracket adapted to be mounted inside the vehicle in a location proximate to or on the front windshield of the vehicle;
a mirror housing coupled to the mounting bracket;
a reflective element located within the mirror housing, the reflective element having a front face defining a reflecting plane, the reflective element configured to reflect an image having a reflecting component in a first direction out of the mirror housing; and
a light source located within the mirror housing, the light source emitting light along a beam axis, the beam axis having a directional component in a second direction;
wherein the first direction and the second direction are perpendicular to the reflecting plane and the first direction is opposite to the second direction.
2. The interior rearview mirror of claim 1, wherein:
the mirror housing includes a rear housing section and a bezel.
3. The interior rearview mirror of claim 1, wherein:
the mirror housing includes a bottom wall having a bottom opening therein.
4. The interior rearview mirror of claim 3, further including:
a deviator configured to redirect the light emitted from the light source through the bottom opening of the housing.
5. The interior rearview mirror of claim 4, wherein:
the deviator comprises a reflector element.
6. The interior rearview mirror of claim 5, wherein:
the reflector element comprises a mirror.

7. The interior rearview mirror of claim 6, wherein:
the mirror is planar.
8. The interior rearview mirror of claim 5, wherein:
the reflector element is a light pipe.
9. The interior rearview mirror of claim 4, further including:
a lens covering the bottom opening in the housing.
10. The interior rearview mirror of claim 9, wherein:
the lens diffuses light exiting the bottom opening.
11. The interior rearview mirror of claim 1, wherein:
the reflective element comprises an electrochromic mirror subassembly including a front glass element and a rear glass element, with electrochromic material located between the front glass element and the rear glass element.
12. The interior rearview mirror of claim 1, wherein:
the light source comprises a LED.
13. The interior rearview mirror of claim 1, further including:
a carrier plate located within the housing, with the carrier plate including a first face and a second face; and
a printed circuit board located adjacent the second face of the carrier plate, with the printed circuit board including a first side facing the carrier plate and a second side facing away from the carrier plate;
wherein the reflective element is located adjacent the first face of the carrier plate and the light source is connected to the second side of the printed circuit board.

14. The interior rearview mirror of claim 1, wherein:
the reflective element has a reflectance value of about 70 percent or greater.
15. The interior rearview mirror of claim 1, wherein:
the beam axis is angled within about 45° relative to the second direction.
16. The interior rearview mirror of claim 15, wherein:
the beam axis is parallel to the first direction.
17. A rearview mirror subassembly comprising:
a housing having a front opening and a bottom opening;
a reflective element located within the housing, the reflective element configured to reflect light through the front opening;
a light source located within the housing;
a deviator configured to redirect the light emitted from the light source through the bottom opening of the housing.
18. The rearview mirror subassembly of claim 17, wherein:
the reflective element has a front face defining a reflecting plane, the reflective element configured to reflect the light having a reflecting component in a first direction through the front opening;
the light source emits light along a beam axis, the beam axis having a directional component in a second direction; and
the first direction and the second direction are perpendicular to the reflecting plane and the first direction is opposite to the second direction.
19. The rearview mirror subassembly of claim 18, wherein:
the beam axis is angled within about 45° relative to the second direction.

20. The rearview mirror subassembly of claim 19, wherein:
the beam axis is parallel to the first direction.
21. The rearview mirror subassembly of claim 17, wherein:
the housing includes a rear housing section and a bezel.
22. The rearview mirror subassembly of claim 17, wherein:
the deviator comprises a reflector element.
23. The rearview mirror subassembly of claim 22, wherein:
the reflector element comprises a mirror.
24. The rearview mirror subassembly of claim 23, wherein:
the mirror is planar.
25. The rearview mirror subassembly of claim 22, wherein:
the reflector element is a light pipe.
26. The rearview mirror subassembly of claim 17, further including:
a lens covering the bottom opening in the housing.
27. The rearview mirror subassembly of claim 26, wherein:
the lens diffuses light exiting the bottom opening.
28. The rearview mirror subassembly of claim 17, wherein:
the reflective element comprises an electrochromic mirror subassembly including a
front glass element and a rear glass element, with electrochromic material located between the
front glass element and the rear glass element.

29. The rearview mirror subassembly of claim 17, wherein:
the light source comprises a LED.
30. The rearview mirror subassembly of claim 17, further including:
a carrier plate located within the housing, with the carrier plate including a first face and a second face; and
a printed circuit board located adjacent the second face of the carrier plate, with the printed circuit board including a first side facing the carrier plate and a second side facing away from the carrier plate;
wherein the reflective element is located adjacent the first face of the carrier plate and the light source is connected to the second side of the printed circuit board.
31. The rearview mirror subassembly of claim 17, wherein:
the reflective element has a reflectance value of about 70 percent or greater.
32. A rearview mirror subassembly for a vehicle comprising:
a mirror housing having a bottom opening;
a reflective element located within the mirror housing, the reflective element being configured to reflect an image having a reflecting component in a first direction out of the mirror housing; and
a light source located within the mirror housing, the light source emitting light along a beam axis, the beam axis having a directional component in a second direction; and
a deviator configured to redirect the light emitted from the light source through the bottom opening of the housing;
wherein the first direction and the second direction are parallel and opposite.
33. The rearview mirror subassembly of claim 32, wherein:
the mirror housing includes a rear housing section and a bezel.

- 34. The rearview mirror subassembly of claim 32, wherein:
the deviator comprises a reflector element.
- 35. The rearview mirror subassembly of claim 34, wherein:
the reflector element comprises a mirror.
- 36. The rearview mirror subassembly of claim 35, wherein:
the mirror is planar.
- 37. The rearview mirror subassembly of claim 34, wherein:
the reflector element is a light pipe.
- 38. The rearview mirror subassembly of claim 32, further including:
a lens covering the bottom opening in the housing.
- 39. The rearview mirror subassembly of claim 38, wherein:
the lens diffuses light exiting the bottom opening.
- 40. The rearview mirror subassembly of claim 32, wherein:
the reflective element comprises an electrochromic mirror subassembly including a
front glass element and a rear glass element, with electrochromic material located between the
front glass element and the rear glass element.
- 41. The rearview mirror subassembly of claim 32, wherein:
the light source comprises a LED.
- 42. The rearview mirror subassembly of claim 32, further including:
a carrier plate located within the housing, with the carrier plate including a first face
and a second face; and

a printed circuit board located adjacent the second face of the carrier plate, with the printed circuit board including a first side facing the carrier plate and a second side facing away from the carrier plate;

wherein the reflective element is located adjacent the first face of the carrier plate and the light source is connected to the second side of the printed circuit board.

43. The rearview mirror subassembly of claim 32, wherein:

the reflective element has a reflectance value of about 70 percent or greater.

44. The rearview mirror subassembly of claim 32, wherein:

the beam axis is angled within about 45% relative to the second direction.

45. The rearview mirror subassembly of claim 44, wherein:

the beam axis is parallel to the first direction.

46. A rearview mirror subassembly comprising:

a housing having a front opening and a bottom opening:

a reflective element located within the housing, the reflective element having a front face configured to reflect light through the front opening and a rear face;

a printed circuit board including a first side facing towards the reflective element and a second side facing away from the reflective element;

a LED device directly connected to the second side of the printed circuit board;

wherein light from the LED device exits the housing through the bottom opening in the housing.

47. The rearview mirror subassembly of claim 46, wherein:

the LED device emits light along a beam axis; and

the beam axis of the light emitted from the LED device is non-parallel with a line perpendicular to the second side of the printed circuit board.

48. The rearview mirror subassembly of claim 47, wherein:
the beam axis of the light emitted from the LED device is substantially perpendicular to the line perpendicular to the second side of the printed circuit board.
49. The rearview mirror subassembly of claim 46, wherein:
the housing includes a rear housing section and a bezel.
50. The rearview mirror subassembly of claim 46, wherein:
the reflector element comprises a mirror.
51. The rearview mirror subassembly of claim 50, wherein:
the mirror is planar.
52. The rearview mirror subassembly of claim 46, further including:
a lens covering the bottom opening in the housing.
53. The rearview mirror subassembly of claim 52, wherein:
the lens diffuses light exiting the bottom opening.
54. The rearview mirror subassembly of claim 46, wherein:
the reflective element comprises an electrochromic mirror subassembly including a front glass element and a rear glass element, with electrochromic material located between the front glass element and the rear glass element.
55. The rearview mirror subassembly of claim 46, further including:
a carrier plate located between the reflective element and the printed circuit board.
56. The rearview mirror subassembly of claim 46, wherein:
the reflective element has a reflectance value of about 70 percent or greater.

57. The rearview mirror subassembly of claim 46, further including:
a deviator configured to redirect the light emitted from the LED device through the bottom opening of the housing.
58. The rearview mirror subassembly of claim 57, wherein:
the front face of the reflective element defines a reflecting plane;
the reflective element is configured to reflect light having a reflecting component in a first direction through the front opening;
the LED device emits light along a beam axis;
the beam axis has a directional component in a second direction; and
the first direction and the second direction are perpendicular to the reflecting plane and the first direction is opposite to the second direction.
59. The rearview mirror subassembly of claim 58, wherein:
the beam axis is angled within about 45° relative to the second direction.
60. The rearview mirror subassembly of claim 59, wherein:
the beam axis is parallel to the first direction.
61. The rearview mirror subassembly of claim 57, wherein:
the deviator comprises a reflector element.
62. The rearview mirror subassembly of claim 61, wherein:
the reflector element comprises a mirror.
63. The rearview mirror subassembly of claim 62, wherein:
the mirror is planar.
64. The rearview mirror subassembly of claim 61, wherein:
the reflector element is a light pipe.